

**RELATED APPLICATIONS**

[001] The following commonly owned and assigned patent applications are hereby incorporated by reference in their entirety:

09/730,864  
1) Pending Patent Application No. ~~CNTW-001/00US~~, entitled ***System and Method for Configuration, Management and Monitoring of Network Resources***, filed on December 6, 2000;

09/730,680  
2) Pending Patent Application No. ~~CNTW-002/00US~~, entitled ***System and Method for Redirecting Data Generated by Network Devices***, filed on December 6, 2000;

09/730,683  
3) Pending Patent Application No. ~~CNTW-003/00US~~, entitled ***Event Manager for Network Operating System***, filed on December 6, 2000;

10/213,949  
4) Pending Patent Application No. ~~CNTW-005/00US~~, entitled ***Network Component Configuration and Management Method***, filed on December 6, 2000; and

09/730,682  
5) Pending Patent Application No. ~~CNTW-006/00US~~, entitled ***Network Operating System Data Directory***, filed on December 6, 2000.

09/730,864  
[022] In one embodiment of the present invention, the dynamic configuration of network devices is achieved through directory-based networking. One example of directory-based networking is described in commonly owned and assigned patent application no. ~~CNTW-001/00US~~, entitled *System and Method for Configuration, Management and Monitoring of Network Resources*, filed on December 6, 2000. Briefly, directory-based networking involves storing a configuration record for each network device in a central repository. When a network device needs to be reconfigured, the centrally-stored configuration record for that device can be retrieved and altered. The altered configuration record can then be used to generate the device-specific code needed to reconfigure the relevant network devices. Finally, once the device-specific code has been generated, that code is provided (either through a push or get) to the appropriate network device(s). Thus, by using directory-based networking, network devices can be dynamically configured with a minimal amount of actual human intervention, thereby allowing for just-in-time provisioning of network resources.

[023] Referring now to FIGURE 3, there is illustrated a flowchart of the process of bandwidth optimization on a network system such as the one in FIGURE 2. In particular, FIGURE 3 describes the process for optimizing the utilization of a fiber optic line or any other type of line. Initially, an enterprise requests a bandwidth of a certain size between two points for a particular timeframe (or for a particular volume of data). Next, a path 305 and the associated network devices that can provide the requested bandwidth are identified 310. The network devices along that path are then configured to provide the requested bandwidth 315. For example, the optical devices along the identified path can